



MONTHLY WEATHER REVIEW.

VOL. XXI.

WASHINGTON, D. C., JANUARY, 1893.

No. 1.

BOARD OF EDITORS { Mr. Horace E. Smith, Chief Clerk of Weather Bureau,
Professors Henry A. Hazen, Thomas Russell, and Charles F. Marvin, and
Mr. Edward B. Garriott, in charge of Review Room.

INTRODUCTION.

This REVIEW is based on reports for January, 1893, from 2,785 regular and voluntary observers. These reports are classified as follows: 164 reports from Weather Bureau stations; 47 reports from United States Army post surgeons; 2,010 monthly reports from state weather service and voluntary observers; 220 reports through the Central Pacific Rail-

way Company; 319 marine reports through the co-operation of the Hydrographic Office, Navy Department; 25 reports from Canadian stations; marine reports through the "New York Herald Weather Service"; monthly reports from local services established in all states and territories; and international simultaneous observations. Trustworthy newspaper extracts and special reports have also been used.

CHARACTERISTICS OF THE WEATHER FOR JANUARY, 1893.

The month was characterized by exceptionally low temperature and heavy snowfall in the Middle and Southeastern States. Navigation in the rivers of the middle and northern districts was suspended on account of ice, and streams in northern parts of the Gulf and south Atlantic states were frozen. During a great part of the month ice seriously interfered with navigation in the harbors and bays of the Atlantic coast from Maine to North Carolina.

TEMPERATURE.

In the Atlantic coast states from Massachusetts to northern Florida, in the Ohio Valley and the southern lake region, and at points in central and northern Illinois and northeastern Iowa the month was the coldest January on record. At stations in the middle and southern Rocky Mountain and plateau regions, and in southern California the month was the warmest January on record. A succession of severe cold waves visited the east Gulf and south Atlantic states. In Florida the cold waves of the 7th, 14th, and 17th caused considerable damage to fruit in the vicinity of Jupiter. On the 17th frost was reported as far south as the southern extremity of the "Everglades."

PRECIPITATION.

Less than the usual amount of precipitation was reported, except in an area extending from the south Pacific coast to Montana and North Dakota, and over the northern lake region. From the middle and lower Mississippi rivers to the middle and southern Rocky Mountain regions, at stations in the north Pacific coast states and Tennessee, and at Albany, N. Y.,

the monthly precipitation was the least ever reported for January. At stations in the Red River of the North Valley and North Dakota the monthly precipitation was the greatest ever reported for January. In the middle and south Atlantic states, Arkansas, and north parts of the middle and west Gulf states the monthly snowfall was unusually heavy. In North Carolina and South Carolina the monthly snowfall averaged about 12.0 inches and 6.0 inches, respectively.

STORMS.

Exceptionally severe gales prevailed over New England during the 1st and 2d. On the 5th and 6th heavy snow impeded railroad traffic in southern New England and the eastern parts of the middle Atlantic states, and destructive gales occurred along the middle Atlantic and New England coasts. From the 8th to the 10th a heavy snow and wind storm extended from the upper lake region over the middle Atlantic states. On the 12th heavy snow fell in the middle Atlantic states and along the south New England coast, and on the 13th snow fell over the interior of South Carolina. An exceptionally severe wind storm prevailed on the north Pacific coast during the 14th and 15th. A heavy snowstorm set in over Arkansas on the 17th and extended thence to the south Atlantic coast by the 18th. This snowstorm continued about two days, and was reported the severest ever experienced in the sections visited. A strong north gale, with heavy rain, thunder, and lightning, visited Key West, Fla., on the 24th. A destructive windstorm was reported at Heber, Utah, on the 30th. A severe storm of wind and snow, with very low temperature, occurred in the upper Missouri valley on the 31st.

ATMOSPHERIC PRESSURE (expressed in inches and hundredths).

The distribution of mean atmospheric pressure for January, 1893, as determined from observations taken daily at 8 a. m. and 8 p. m. (75th meridian time), is shown on Chart II by isobars.

The first of a series of charts showing the normal distribution of atmospheric pressure and prevailing winds over the United States and Canada for each month appears with

this issue of the REVIEW. These charts exhibit normal pressure determined from Weather Bureau records for twenty years, and prevailing wind directions based upon records for fifteen years. The series will be completed with the publication in the Annual Summary for 1893 of a chart of annual normal pressure. The publication of these charts is preliminary to the publication by the Weather Bureau of specially